DOCUMENT RESUME

ED 164 710 UD 019 006

AUTHOR Linsenmeier, Joan, A. W.; Wortman, Paul M.
TITLE Research Review of Equal Education. The Riverside School Study of Desegregation: A Re-Examination.
INSTITUTION Northwestern Univ., Evanston, Ill. Center for Equal Education.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE 78
NOTE 41p.
JOURNAL CIT Research Review of Equal Education; v2 n2 Spr 1978

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Academic Achievement; Case Studies (Education); Elementary Secondary Education; *Integration Effects; Minority Group Children; Research Methodology; *Research Reviews (Publications); *Research Utilization; *School Integration
IDENTIFIERS *California (Riverside)

ABSTRACT

In this issue, a study of school desegregation in Riverside, California is re-examined in terms of its contribution to an understanding of the relationship between desegregation and the academic achievement of minority children. General comments about the Riverside study as a whole are followed by descriptions of the models and assumptions tested in the study and the conclusions reached regarding each model tested. Methodology employed in the study is evaluated in an attempt to determine the degree of confidence that should be placed in the findings and what conclusions may be legitimately drawn from the results of the study. It is concluded that the Riverside study illustrates the fact that school desegregation is not a failure, but that ameliorative programs necessary to make it work have not been specified as yet. (EB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

RESEARCH REVIEW OF EQUAL EDUCATION

ED164710

The Riverside School Study of Desegregation: A Re-Examination

Joan A. W. Linsenmeier and Paul M. Wortman

3	Three Models
6	General Comments
6	A. A Unique Situation
8	B. The Lack of Experimental Control
11	C. Incomplete Use of Data
13	D. Lack of Organization
14	Did Minority Achievement Improve?
17	Model I: Improved Achievement Through Lateral Transmission of Values
24	Model II: Improved Achievement Through the Normalization of Instruction
27	Model III: Improved Achievement as a Consequence of the Absence of Discrimination
32	A Featured Finding: Effects of Teacher Bias
34	Conclusions
37	**Works Cited**

UDO 19006

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

NOV 3 0 1978

Volume 2, No. 2/Spring 1978

Meyer Weinberg, Editor
Gertrude Martin, Editorial associate
Dan Weinberg, Business manager
Joyce Mirza, Research assistant
Carol Naughton, Design
Sarge Ruck, Development Director

Published quarterly by the Center for Equal Education,
School of Education, Northwestern University,
2003 Sheridan Road, Evanston, Illinois 60201.
Phone: 312/492-9465.

US ISSN 912008-14-8

Subscription rates:

1 year $15.00
2 years $28.00
3 years $38.00
(Add $1.50 per year for foreign postage)
Single copy: $4.00 plus postage:
30c domestic 40c foreign

Publication of the **Research Review of Equal Education** is made possible by a grant from the National Institute of Education, Department of Health, Education, and Welfare. The views expressed herein are solely those of the authors and no endorsement or support from the National Institute of Education and the Department of Health, Education, and Welfare is intended or should be inferred.

The Riverside School Study of Desegregation: A Re-examination

Joan A. W. Linsenmeier and Paul M. Wortman
Division of Methodology and Evaluation Research,
Department of Psychology, Northwestern University

In 1975 Gerard and Miller published a book reporting findings from their study of the impact of school desegregation in Riverside, California.[1] They and their colleagues collected a wide range of data on both minority and white children in Riverside for a number of years, and their study of how desegregation affects school children has been hailed as "the most thorough to date"[2] and "the most long-term, completely documented, and widely noted."[3] However, St. John[4] has also described the results of the study as "particularly discouraging," and the report has often been used to support arguments opposing the desegregation of schools. In light of this study's potential contribution to our understanding of the consequences of desegregation, an in-depth review of its aims, its methodology, and its findings seems warranted. The primary focus of the present review will be on what the Riverside study can actually tell us about the relationship between school desegregation and the academic achievement of minority children.

Three Models

In the first chapter of their book, Gerard and Miller present a series of assumptions underlying three different hypothetical processes by which desegregated schooling might lead to improved academic achievement by minority children. According to each of the processes, or models, changes in achievement are the result of changes in the personalities of minority children. The three models and their underlying assumptions represent ways of thinking about school racial composition and achievement that were popular in the mid 1960s when the Riverside study was initiated. At that point in time few empirical data were available to assess the validity of some of them, but they were part of the rationale used by laymen, educators, social scientists, and policymakers who supported the idea of school

1. H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).
2. E. Useem, in a review of *School Desegregation* by H. B. Gerard and N. Miller, *Harvard Educational Review*, 47 (1977), p. 71.
3. N. H. St. John, *School Desegregation: Outcomes for Children* (New York: Wiley, 1975), p. 25.
4. *Ibid.*

desegregation. Some seem less plausible in the late '70s than they did ten or 15 years ago due to increased experience with desegregated schooling, a change in social climate, and apparently negative empirical findings from studies like that conducted in Riverside. Rather than faulting Gerard, Miller, and their associates for attempting to find support for certain ideas which now seem untenable, it is preferable to outline each of their hypothetical models and then, after some general comments, to examine the data from Riverside as these relate to each of the three models in turn.

The first model linking desegregated schooling to minority achievement involves the "lateral transmission of values."[5] According to this notion, school desegregation will lead to improved minority achievement because minority children will adopt the majority group norm of valuing achievement and striving for excellence. The influential Coleman report,[6] published soon after Gerard and Miller initiated their research, favored this model as the mechanism leading to superior minority achievement in schools with a larger percentage of white students. If this model is correct, then four different underlying assumptions must be true as well:

Assumption 1a. Prior to desegregation, white children value academic achievement more than do minority children.

Assumption 1b. Following school desegregation, minority and white children will interact, and minority children will thus be exposed to the achievement-oriented values of their white peers.

Assumption 1c. Exposure to majority group norms will lead to their adoption by minority children. In other words, school desegregation will lead minority children to place increased value on academic achievement.

Assumption 1d. Increased valuing of academic achievement will lead to an improved achievement level, i.e., a linear and casual relationship exists between an individual's desire for achievement and the level of achievement which he or she attains.

The second model explaining why school desegregation might improve minority achievement involves the "normalization of instruction,"[7] the tendency of teachers to gear their teaching to the average level of the students in their classroom. According to this model, desegregated minority children will perform better as a consequence of exposure to higher performance standards. For this second model to operate, a number of assumptions must hold:

Assumption 2a. Desegregated classrooms will expose minority

5. H. B. Gerard and N. Miller, "Introduction." In Gerard and Miller, *School Desegregation*, p. 3.
6. J. S. Coleman, E. Q. Campbell, C. J. Hobson, J. McPartland, A. M. Mood, F. D. Weinfeld, and R. L. York, *Equality of Educational Opportunity* (Washington, D.C.: U.S. Government Printing Office, 1966).
7. H. B. Gerard, "The Study." In Gerard and Miller, *School Desegregation*, p. 21.

children to more advanced curricula and higher performance standards.

Assumption 2b. Exposure to higher performance standards set externally by the teachers will lead minority children to set higher personal standards for themselves.

Assumption 2c. Aiming for a higher level of performance will cause minority children to perform better.

According to the third model relating school racial composition to minority group performance, beneficial effects will result from the absence of discrimination and the ensuing increase in the self-esteem of minority children. Much evidence submitted to the court by social scientists in connection with the 1954 Supreme Court decision outlawing segregated education reflected a belief that segregated schooling had detrimental effects on minority children's self-esteem, and Chief Justice Earl Warren, in delivering the court's decision, agreed that: "To separate [minority children] from others of similar age and qualification solely because of their race generates a feeling of inferiority as to their status in the community that may affect their hearts and minds in a way unlikely ever to be undone."[8] It was presumed, then, that ending desegregated schooling would eliminate, or at least lessen, this feeling of inferiority and that more positive feeling about themselves would allow minority students to function more effectively in the school environment. Three underlying assumptions seem to be involved here:

Assumption 3a. Desegregated schooling will provide minority children with evidence that others do not regard them as inferior. In presenting this model, Gerard and Miller emphasize the importance of the opinions of authority figures, and especially those of teachers and school administrators.

Assumption 3b. The perception of others' favorable attitudes towards them will have a beneficial effect on minority children's attitudes towards themselves.

Assumption 3c. An increase in self-esteem will lead to an improvement in academic performance.

Many of the data discussed in Gerard and Miller's **School Desegregation** are aimed at testing these three models and their associated assumptions. In succeeding sections we will indicate how Gerard, Miller, and their colleagues tested each model and will report the conclusions which they reached. In addition we will try to evaluate the methodology they used in each case in an attempt to decide how much confidence should be placed in their findings and what conclusions may legitimately be drawn from the results of their investigation. Before discussing the three separate models, however, we will present some general comments about the Riverside study as a whole.

8. *Brown v. Board of Education*, 347 U.S. 483 (1954).

General Comments

A. A Unique Situation

In their classic handbook on experimental design, Campbell and Stanley[9] pointed out two types of problems that may limit the conclusions which can be drawn from a study, threats to external validity and threats to internal validity. Threats to external validity limit the confidence with which one can expect relationships found in a specific context to generalize to other settings, other populations, and other modes of implementing the treatment variable. In the present instance, they influence the usefulness of knowledge about the impact of desegregation in Riverside for explaining events in Boston in the past few years, or telling us what we can expect if wide-scale desegregation is introduced in Chicago, and so on. As St. John[10] has noted, local variables such as the manner in which desegregation is implemented and the attitudes of community members will affect the outcome of a school desegregation program. Hence, anyone wishing to apply knowledge gained in Riverside to a separate desegregation situation should be aware of certain special features of the situation in Riverside.

Riverside, California, has a population of about 150,000 and is located about 60 miles east of Los Angeles. In the 1965-66 school year, the year prior to the main wave of desegregation, the school population was six percent black and ten percent Mexican-American. Thus, unlike many communities, Riverside had a minority population that was primarily Mexican-American, not black. The school system was desegregated by closing the three schools that had nearly 100 percent minority enrollment and busing these minority students to other schools in the district. Most students were transferred in fall 1966. Some, however, entered their new schools in fall 1965 after fire destroyed a wing of their old one, and some Mexican-American children remained in their neighborhood school until fall 1967. Due to the size of the community and the method of school assignment, no children were required to ride great distances on their buses. The average bus ride was 3½ miles, and the maximum ride was only seven miles. Furthermore, the white children in Riverside continued to attend their neighborhood schools. Prior to desegregation these white children attended classes in which an average of eight percent of the children were members of minority groups (average class size was 24.9; average number of minority students per class was 2.1). After desegregation approximately 20 percent of their classmates came from minority backgrounds (5.9 minority students out of a total of 28.9 students for the average classroom). Thus, even after the busing program was fully implemented, white children were in classes in which their own group was clearly in the majority.

9. D. T. Campbell and J. C. Stanley, *Experimental and Quasi-Experimental Designs for Research* (Chicago: Rand McNally, 1963).
10. St. John, *School Desegregation: Outcomes for Children.*

Minority children were exposed to much greater change and inconvenience than whites as a consequence of desegregation.

The desegregation program in Riverside was implemented relatively early. Obviously, predictions about the impact of present and future desegregation programs must be based on evidence from programs implemented in the past. Still it should be kept in mind that the social and political climate in the mid-1960's, when the Riverside schools were desegregated, was quite different from that of the present time. Another way in which the Riverside program differs from many more recent desegregation programs is in the speed with which it was implemented. Only seven weeks elapsed between the September evening when a group of black parents decided to circulate a petition calling for integrated schooling and the October meeting of the board of education at which a tentative plan for desegregation was presented and adopted. According to the narrative supplied in Gerard and Miller's book, the central administration in Riverside seems to have made it clear that they were in favor of school desegregation and wanted it to work. In addition to their speedy adoption of a desegregation plan, they quickly organized special in-service training programs to help teachers and principals deal with problems arising in their classrooms, introduced new curriculum materials aimed at decreasing minority children's feelings of alienation, and so forth. The potential importance of this institutional efficiency and support is clear from several studies which have compared successful and unsuccessful desegregation programs. To quote Pettigrew: "Violence has generally resulted in localities where at least some of the authorities give prior hints that they will gladly return to segregation if disturbances occurred; peaceful integration has generally followed firm and forceful leadership."[11] Similarly, some observers have blamed problems arising in conjunction with the attempt to introduce desegregated schooling in Boston on the city leaders' slowness and apparent procrastination on the matter. According to Finger, the "tediously slow process . . . allowed the opposition to become fully and completely organized and the animosities and ill will to become intensified and hardened."[12] The fact that the school administration and board in Riverside clearly planned to go ahead with desegregation is likely to have contributed to the paucity of community opposition there.

This brings us to the matter of how Riverside's citizens and parents reacted to school desegregation. Not surprisingly, attitudes appear to have differed among the three ethnic groups. The main push for desegregation came from black parents, with a petition from the black community plus the burning of a section of one of the predominantly black schools constituting the major impetus to action by the school administration. Mexican-Americans, who constituted

11. T. Pettigrew, "Social Psychology and Desegregation Research," *American Psychologist*, 16 (1961), p. 105.
12. J. A. Finger, "Why Busing Plans Work," *School Review*, 84 (1976), p. 370.

the largest minority group, were much less enthusiastic. Their neighborhood school was apparently a central focus of their community life, and it took several meetings between parent representatives and school officials before the parents agreed that desegregation would be in their children's best interests. Thus, people attempting to generalize from the Riverside situation should keep in mind that a significant portion of the minority parents initially opposed the desegregation plan.

There was also some open opposition to desegregation among white parents, especially in one affluent neighborhood, but, as discussed above, this opposition was relatively weak. Three reasons for this, in addition to the school administration's firm stand, seem apparent. Two of these have already been mentioned: white children remained in neighborhood schools, and they remained in classrooms where their ethnic group constituted a clear majority. In addition, most of the financial cost of implementing the busing program came from insurance money collected following the burning of one black neighborhood school and from money saved as a direct result of desegregation some schools and eliminating others. Thus, the additional cost to the school district was minimal, and there was little threat of an appreciable increase in school taxes or a cutback in other programs in order to finance the school desegregation program. As stated in Gerard and Miller's book, "school desegregation was simply a hard issue to oppose when it involved such a minimal inconvenience and cost to the majority community."[13] The feeling of white parents that desegregation will make little difference to their lives or the lives of their children does not seem typical of majority parents in many other communities, and, along with other special features of the environment in Riverside, limits the external validity, or generalizability, of any findings emerging from the study of that community's school desegregation program.

B. The Lack of Experimental Control

Threats to internal, as opposed to external, validity limit the confidence with which one can conclude that a treatment variable such as school desegregation had any effects in the specific context in which it was studied, e.g., the Riverside Unified School District in the mid- and late 1960s and early 1970s. An essential requirement for establishing the internal validity of any study is to have some information on what would have happened in that particular setting in the absence of the critical treatment. Thus, in order to be able to state with confidence that certain outcomes for school children in Riverside were a consequence of the desegregation of Riverside's schools, we must have some idea of how things would have been different if desegregation had not occurred. If it were found that Riverside's minority children scored very high on a measure of self-

13. I. G. Hendrick, "The Historic Setting." In Gerard and Miller, *School Desegregation*, p. 42.

esteem following desegregation, we could not attribute their high scores to desegregation without some evidence that, in the absence of desegregation, they would have been lower. We cannot interpret a set of scores without having something with which they may be compared.

In a classical experimental design this comparison is provided by randomly assigning individuals to either an experimental group which receives the treatment or a control group which does not. This random assignment helps to ensure that the two groups are initially equivalent, enabling differences between them following imposition of the treatment variable to be attributed to the effects of that treatment. Since all school children in Riverside were to be desegregated, a control of this sort was not possible (though the transfer of Mexican-American children from Casa Blanca in two separate waves may be viewed as an exception). Thus, a number of quasi-experimental approaches, to use Campbell and Stanley's[14] term, were employed instead. Often, scores obtained by school children following desegregation were compared with those obtained by children in the district during the year before wide-scale desegregation was introduced. One threat common to all these designs is the one that Campbell and Stanley labelled "history." Many events besides the imposition of a desegregation program occurred between the collection of measures from the baseline control group and the collection of measures from the desegregated children one to five years later. We have no way of knowing to what extent these other events influenced the personalities, attitudes, and performance of the children. One factor which is particularly likely to have affected children's school performance is the content of the curricula to which they were exposed. As noted above, a number of new curricula were introduced in the Riverside school system following the decision to desegregate. Another potentially relevant factor is class size, and Gerard and Miller noted that the average class size in Riverside elementary schools increased significantly with the introduction of desegregation. This increase was primarily due to the fact that, prior to desegregation, minority children were generally in relatively small classes. Thus, when black and Mexican-American children were put into desegregated classrooms, they were simultaneously put into classrooms containing more children than the ones they had left.

In some of their analyses Gerard, Miller, and their colleagues classified children according to the average socio-economic status of students in the schools in which they were enrolled, or the degree of racial bias of their classroom teachers, and so forth. Whenever they attempt to draw conclusions about the effects of such variables, additional threats to internal validity arise from the fact that the investigators had no control over the assignment of students to schools or to classrooms, and thus no way of guaranteeing that students

14. Campbell and Stanley, *Experimental and Quasi-Experimental Designs for Research.*

exposed to different school environments did not differ in other ways as well. In some cases, supplementary analyses were performed to check on initial equivalence, and the results were generally encouraging. Still, some uncontrolled differences between these categories of children probably did exist and may have influenced the results of the investigation.

Finally, in many analyses the investigators compared scores of black and Mexican-American children with those of whites. The sample of children studied in Riverside was intended to include all the black and Mexican-American children in the school district plus a sample of white children matched with these minority children on the basis of grade and sex. In order to insure that the white children were optimally representative of the white population, it was necessary that they differ from the minority children in a number of ways, such as SES, self-esteem, and achievement level. Some of these ethnic differences were the objects of study by the research team. Since many of the variables are interrelated, differences on any one of them may be influenced by differences on various others. This makes it quite difficult to come up with an explanation for any particular difference. An additional problem with interethnic comparisons in the Riverside study stems from the fact that only a sample of the white children was studied. Thus, summary data from this group are subject to sampling error, while estimates of minority characteristics should be more stable since nearly the entire population of minority school children was included.

A related problem, discussed by Gerard and Miller, arises from the fact that, in longitudinal studies, loss of subjects over time is generally unavoidable. In this instance, children were no longer available for study if their families left the Riverside school district. Differential loss of subjects from different ethnic groups will affect comparisons among them. Gerard and Miller note that greater percentages of whites and blacks than of Mexican-Americans left the Riverside area. In addition, it appears that a greater percentage of white, as opposed to minority, parents declined permission for their children to be in the study. Since Gerard and Miller had no information on the children who were not allowed to participate, we cannot know how their absence affected the representativeness of the remaining samples. It was possible, however, to examine the characteristics of those children who left the study after the first year of data collection. Fortunately, it was found, whether or not children remained in the study was unrelated to their scores on most of the dependent measures collected prior to desegregation. The investigators do, though, report a tendency within all three ethnic groups for children who had lower achievement test scores to be more likely to leave the study. Furthermore, within the two minority groups, children from families higher in socio-economic status were more likely to leave. While the investigators report that the status

differences were slight and that they introduce "what is probably a negligible bias,"[15] it still seems potentially important that, in the absence of corrections for these differences, comparisons of pre- and post-desegregation scores for the minority groups are comparisons of groups which differ in average socio-economic status. Post-desegregation scores come from children whose average SES is slightly lower, and this may depress their scores on other measures as well.

C. Incomplete Use of Data

One distinguishing feature about the Riverside study of school desegregation is the length of time over which data were collected. Data collection began during the 1965-1966 school year, prior to the main wave of desegregation, and it continued through the 1970-1971 school year. Not all variables, however, were measured for every year of the study. Parents of children in the study sample were interviewed only during the summers of 1966, 1967, and 1969. Teachers evaluated their students on a variety of measures in spring of 1966, 1967, 1968, and 1969, but filled out questionnaires on their own backgrounds, attitudes, and classroom experiences only in spring 1968. No data from parents or teachers were available from 1970 or 1971, the last two years of the study.

Even the data obtained directly from the children in the study were not collected every year. Study children who were still in elementary school were tested individually in two one-hour sessions during the spring semesters of 1965-66, 1966-67, 1968-69, and 1970-71. It was at these testing sessions that children's personalities and attitudes were assessed through the use of a wide variety of measuring instruments. Thus, the variables thought to play the key roles in children's reactions to school desegregation were not measured at all during the third and fifth years of the six-year study, and by the sixth year data were being collected only from those children who had been in kindergarten and first grade at the start of the study and were now in grades five and six. (Incidentally, a shorter report on the Riverside study published in Psychology Today,[16] and undoubtedly read by many more people than the more complete report included in Gerard and Miller's book, seems to give the impression that data were collected for a full ten years. The investigators may, indeed, "have spent the past 10 years studying the effects of school desegregation in Riverside."[17] The large amount of data they collected would certainly require a lengthy period of analysis and evaluation after all the data were in. But the raw data themselves, as reported in the book, come from, at best, a six-year period.)

15. D. Redfearn and H. B. Gerard, "The Overall Research Design and Some Methodological Considerations." In Gerard and Miller, *School Desegregation*, p. 63.
16. N. Miller and H. B. Gerard, "How Busing Failed in Riverside," *Psychology Today*, 10 (June 1976), 66-70 and 100.
17. *Ibid.*, p. 66.

Even if the Riverside study team collected data during only three or four years of a six-year period, this still leaves them with more information about the longitudinal effects of desegregation than is available in many other studies. Unfortunately, however, authors of some of the chapters in Gerard and Miller's book failed to take advantage of all the data available to them. The chapter on teachers' attitudes, for example, focusses on data from only one year.

Another aspect of the Riverside data which was not fully exploited was the fact that data were available for children at several grade levels. The chapter on teacher effects, for instance, consistently lumps children from all grade levels together. And the frequent use of achievement test scores which have been standardized within each grade level may obscure differences in patterns of scores obtained by children of different ages. Several other studies[18] have found that the experience of attending desegregated schools affects younger children more than older ones, and it would be useful to have more information on whether this seemed to be the case in Riverside as well.

Another finding that has emerged in several studies on school desegregation is that desegregated schooling may affect scores on arithmetic achievement tests more than those on verbal or reading ones.[19] The Riverside team concentrated on verbal achievement scores since "only the reading data were gathered systematically over all elementary grades."[20] The failure to look more closely at those arithmetic achievement scores which were available, as well as at their relationships with other variables, may be hiding important effects of school desegregation on children's academic achievement.

Finally, while the investigators do make an attempt to look at how school children are affected by different teachers, they pay little attention to variations among schools. There is also an absence of information on the impact of different school curricula. In another report of the impact of schooling in Riverside, Purl and Dawson[21] suggested that the instructional programs at different schools seemed to result in different levels of student performance. Orfield[22] has claimed that administrators at different schools in Riverside took different approaches to establishing successful desegregated programs. Information on why desegregation might have gone more smoothly and/or had more beneficial effects at some schools than at others would be a useful addition to the Gerard and Miller report.

18. See, e.g., T. W. Mahan, "Project Concern — 1966-68: A Report on the Effectiveness of Suburban School Placement for Inner-City Youth" (Hartford, Conn.: Board of Education, 1968) and L. V. Anderson, *The Effect of Desegregation on the Achievement and Personality Patterns of Negro Children* (doctoral dissertation, George Peabody College for Teachers, 1966; University Microfilms No. 66-11, 237).
19. See, e.g., W. Maynor, *Academic Performance and School Integration: A Multiethnic Analysis* (doctoral dissertation, Duke University, 1970; University Microfilms No. 71-10, 401) and P. N. Prichard, "Effects of Desegregation on Student Success in the Chapel Hill Schools," *Integrated Education*, 7 (1969), 33-37.
20. H. Singer, H. B. Gerard, and D. Redfearn, "Achievement." In Gerard and Miller, *School Desegregation*, p. 74.
21. M. C. Purl and J. A. Dawson, "The Achievement of Students in Primary Grades after Seven Years of Desegregation" (Riverside, Cal.: Riverside Unified School District, 1973).
22. G. Orfield, "How to Make Desegregation Work: The Adaptation of Schools to their Newly-Integrated Student Bodies," *Law and Contemporary Problems*, 39 (1975), 336-338.

Before concluding this section, it seems only fair to point out one explanation of why certain information may be missing from Gerard and Miller's book. The book was originally intended to be the first of a two-volume series. The investigators were aware of the fact that there was more to be said about the consequences of Riverside's school desegregation program, but apparently felt that they were ready to make public a first report. Since the second volume in the series has not yet appeared, three years later, we cannot know if it would remedy some of the problems with the first.

D. Lack of Organization

One problem with the first book on desegregation in Riverside which could not be remedied by the eventual appearance of a second volume is a lack of organization and consistency among chapters. The confusion begins at the start of the first chapter, where evidence of the existence of an achievement gap between white and minority children in Riverside is presented before the reader has had a chance to learn much about the general nature of the study and its setting. As a matter of fact, it is not until one reaches Chpater 5 of the book that one can figure out whether the data presented in Chapter 1 were collected before or after the implementation of desegregated schooling. Only at that point do we learn that the Wechsler IQ scores discussed in Chapter 1 were obtained only in 1967, after the main wave of desegregation had already occurred.

In a number of instances it is not clear why certain variables are or are not discussed together. The chapter on achievement motivation deals with six different measures related to this concept, but ignores the variable called "need for school achievement" which is introduced in the following chapter and seems, on the face of it, to be another measure of motivation to do well. The chapter on academic achievement discusses the relationships of several variables with achievement test scores, but never mentions the effects of teacher bias, effects considered important enough to warrant an entire chapter later in the book.

Some important variables are discussed throughout the book, but are treated in different ways in different places. Scores on the index of teacher discrimination are trichotomized into high, medium, and low bias groups in the section relating discrimination to peer group acceptance, but dichotomized in the section relating it to academic achievement. The academic achievement test scores are reportedly standardized with respect to both grade and sex in the teacher discrimination chapter, but with respect to grade only in the sections focussing on IQ and on personality traits. Sometimes it is just not clear from the text exactly how the achievement test scores are being handled. The investigators apparently computed summary verbal and math achievement scores by combining scores on different tests, but

the text gives no information on which tests were included in which composite scores. Furthermore, our own communications with the investigators suggest that no documentation of these procedures now exists.[23]

What seems to have happended is that the Riverside study of school desegregation was just too extensive to allow the directors of the study to remain in close touch with everything that was going on. The research team included many investigators interested in many things, and each seems to have had a great deal of freedom in choosing a basic approach, a set of measures, and a method of analysis. This freedom is, in many ways, laudable. The study directors could not be expected to be experts in all areas of the investigation. Overall, the specialized expertise of their colleagues and students probably added greatly to the quality of their project. Still, the lack of consistency in data treatment and the failure to relate findings in certain chapters to those in others detract from the cohesiveness of the book and, in our opinion, make for a less forceful presentation.

In the remainder of this paper we will impose our own mode of organization on the mass of findings presented by the Riverside study team. We will first focus on the question of whether desegregating the Riverside schools had any clear-cut and uniform effect on the academic achievement of minority children in the Riverside community. Following this, we will concentrate on the three different models of how effects on achievement might be mediated and will discuss the extent to which the data from Riverside support each of their underlying assumptions. We will discuss an additional finding involving teachers' attitudes towards their students and try to draw some general conclusions about the study's contributions to our knowledge of what happens when school desegregation is introduced in a community. Throughout, our focus will be on the academic achievement of children in the school district. While this is in keeping with the theoretical models presented by the authors and other writers, it ignores a number of chapters in Gerard and Miller's book. The sections on family characteristics, on linguistic changes, and so forth, certainly deserve intensive study as well. However, in order to discuss major theories and results in the space allotted, we have had to limit ourselves and concentrate on only a subset of the many intriguing findings which have emerged.

Did Minority Achievement Improve?

Riverside investigators viewed the improvement of academic achievement of minority children following desegregation in three different ways. For all three types of analyses, however, the dependent

23. Renee Jackson-White, in a phone conversation with Michael Hendricks, September 24, 1976.

measures of interest were scores on tests of verbal achievement administered to children in grades 4 through 6 each October and to those in grades 1 through 3 each May. The specific tests used were chosen by the state and local boards of education and differed from grade to grade and from year to year. In general, norms for these standardized tests were based on predominantly white samples. As with most measures used in the Riverside study, their reliability and validity when used with minority children are unclear. A further problem shared by most measures is the fact that research has shown that children's test responses can be affected by the race of the test administrator.[24] Both the teachers administering tests in the classrooms and the interviewers conducting individual sessions with the children under study were predominantly white. As the investigators point out, most authority figures encountered in the school environment are white, and thus biases occurring in the testing sessions are likely to be found in more usual school situations as well.

The first analysis of the effects of desegregation on school achievement utilized longitudinal data from those children tested in grade 1 in May 1966, prior to the main wave of desegregation, and retested later when they were in grades 3 and 6. Since no comparable group which remained in segregated schools was available, scores of these children were compared with cross-sectional data from 1966, i.e., with scores obtained by Riverside first, third, and sixth graders in that year. (The text does not make it clear whether the sixth graders' scores were those obtained in October 1965, prior to desegregation, or in October 1966, the month after the desegregation program was begun.) Comparison of grade-equivalent achievement test scores revealed no significant difference between the longitudinal and cross-sectional data for any ethnic group. Instead, each group performed about the same following desegregation as before it. Thus, desegregation appeared to have no effect at all on verbal achievement. Furthermore, trend analysis showed that, both before and after desegregation, Mexican-Americans and blacks consistently lost ground relative to national norms and relative to Riverside whites as they grew older.

This mode of analysis failed to control for events other than desegregation which occurred between the 1966 and the later testing sessions. An additional problem is that the desegregated group included only one age cohort, so no information on whether desegregation affects children of different ages differently is yielded by this approach. Furthermore, it is not clear that the desegregated group is even representative of its own cohort since students not present at all three years' testing sessions were eliminated from the group. It is always hard to draw conclusions from a finding of no

24. J. M. Sattler, "Racial Experimenter Effects." In K. S. Miller and R. M. Dreger (Eds.), *Comparative Studies of Blacks and Whites in the United States* (New York: Seminar Press, 1973).

difference between groups, and this is especially so for a quasi-experimental design like this one where so many threats to validity are present.

Fortunately, these threats can be partially reduced by taking advantage of the fact that, within the overall Riverside sample, there was a subsample of Mexican-American students who were desegregated in two waves one year apart, in fall 1966 and fall 1967. All these students attended the same elementary school, Casa Blanca, prior to desegregation. The investigators were not entirely clear about the process by which students were assigned to these two waves. It seems unlikely, however, that assignment was done on a truly random basis. Still, the two groups were similar in many respects. Their 1965-1966 IQs, grades, sociometric popularity, and socio-economic backgrounds did not differ. The original investigators did find that the 1966 desegregation wave scored significantly lower than the 1967 wave in predesegregation reading achievement. Subsequent analyses of the data have shown that parents of those in the first wave also expressed more positive attitudes towards desegregation when interviewed in summer 1966.[25]

The Riverside researchers decided that the groups were "approximately comparable, randomly selected samples from the same population"[26] and treated the data as though they came from an experimental design. Analysis of variance was carried out on children's standardized verbal achievement scores with year desegregated and year of testing (1965-66, 1966-67, 1967-68, and 1968-69) as the two factors. This analysis revealed an overall difference between desegregation waves which reflected a maintenance of the initial achievement difference, but there was no wave by year of testing interaction. The difference between the two waves remained the same from year to year. In addition, a repeated measures analysis of variance and a covariance analysis performed on these scores yielded no reliable differences, suggesting again that the additional year of desegregation experienced by the 1966 wave had no effect on reading achievement.

While eliminating some of the difficulties arising from the comparison of cross-sectional and longitudinal data, this approach still has a number of problems. For example, it fails to look at differences among age groups and to use the most proper adjustments for initial differences. Fortunately, reanalysis of the Casa Blanca data using a more appropriate approach confirmed the original conclusion that desegregation had no effects on the verbal achievement of Mexican-American children.[27]

25. J. M. Moskovitz and P. M. Wortman, "A Secondary Analysis of the Riverside School Desegregation Study" (Draft paper. Evanston, Ill.: Northwestern University Psychology Department, 1977).
26. Singer, Gerard, and Redfearn, "Achievement," p. 78.
27. See Moskovitz and Wortman, "A Secondary Analysis . . .", for a fuller discussion of problems with the original Casa Blanca analysis, as well as the details of their own reanalysis of these data.

The original investigators used one other approach in their attempt to check for salutary effects of school desegregation on minority achievement. They grouped all sample children according to the year in which they were desegregated and then looked at mean standardized verbal achievement scores after one, two, three, four, and five years of desegregated schooling. The analysis used failed to adjust for the fact that most individuals contributed scores to the means for more than one year. The authors also fail to report the statistical results of the analysis. They conclude, though, that "with the exception of minor fluctuations, the Anglos maintained or increased their relative advantage through successive years."[28] Thus, once again, there was no evidence that merely exposing minority children to desegregated schooling would help to eliminate the gap between their academic achievement and that of their white peers. The best that can be said is that minority children fared no worse after desegregation than before it. Also, contrary to the fears of some opponents of desegregation, white children apparently performed no worse after desegregation, either.

With respect to performance on standard tests of verbal achievement, then, these analyses suggest that eliminating separate schools for minority children in Riverside and placing them in classrooms with whites had no good or ill effects on any ethnic group. Perhaps different conclusions might be drawn from analyses employing different criterion measures, e.g., tests of mathematical achievement or tests more directly related to the specific content of school curricula. Using the available evidence on achievement, though, all we can say is that desegregation alone appears not to have disturbed the status quo.

In light of the fact that no support was found for the expectation that school desegregation would have beneficial effects on minority achievement, it may seem somewhat academic to proceed with an examination of the three hypothetical models explaining why these effects should emerge. Clearly, there are flaws in the assumptions underlying each model. It is still of considerable interest, however, to attempt to determine where the flaws lie. Furthermore, while desegregation seemed to have no overall effects on achievement, certain children did fare better than others. A close examination of the three models may also yield clues about what facets of a child's experience with desegregation are most important in determining what his or her reactions to that experience will be.

Model I: Improved Achievement Through the Lateral Transmission of Values

One explanation for why school desegregation should lead to improved academic performance by minority children involves their

28. Singer, Gerard, and Redfearn, "Achievement," p. 79.

adoption of the majority children's favorable attitudes towards doing well. The first assumption underlying this hypothesis of lateral transmission of values is our Assumption 1a: *Prior to desegregation, white children value academic achievement more than do minority children.* An entire chapter of Gerard and Miller's book on the Riverside school study is devoted to measures of achievement-relevant motivation. Unfortunately, only two of the six measures of achievement motivation discussed there were administered to children during the spring 1966 testing sessions, the only sessions which took place prior to the main wave of desegregation. Thus, only scores on these two measures provide data relevant to Assumption 1a.

Both these measures involve goal setting in a ring-toss game. On 11 consecutive trials children were to try to toss each of nine rings onto a peg. Prior to all trials they stated how many rings they thought they would successfully get on. Two different scores were constructed for each child: "goal discrepancy," based on the difference between a child's stated expectation and his performance on the previous trial, and "number of unusual shifts," the number of times the child lowered his expectations after meeting a prior goal or raised them after failing to meet it. Previous research suggests that, among middle-class white males, those with smaller goal discrepancies and fewer unusual shifts will tend to receive higher scores on other measures of achievement motivation.[29] However, the validity of these goal-setting scores for other groups of subjects is unclear. Still, it is consistent with Assumption 1a that, in 1966, white children in Riverside showed smaller goal discrepancies and made fewer unusual shifts than did children in either minority group.

An additional variable which may be considered a measure of achievement motivation is discussed in the chapter on personality traits. Riverside researchers constructed a 15-item questionnaire they called "need for school achievement." In responding to this questionnaire, children answered such items as "would you be happy if you got all C's on your report card?" The questionnaire was administered to children in grades 4 through 6 in spring 1966, as well as to fifth through seventh graders in 1967 and to those in fourth grade through junior high school in 1969. On this measure, like the goal discrepancy measures, white children's scores differed from those of minority children in 1966. Prior to desegregation whites appeared to have a greater need for school achievement than either Mexican-Americans or blacks.

According to the lateral transmission of values hypothesis, the achievement-relevant values of minority children will increase and become more similar to those of white children when the groups interact in desegregated schools. Thus Assumption 1b states that *desegregated schooling will lead minority children to interact with*

29. See, e.g., C. P. Smith, "The Origin and Expression of Achievement-Related Motives in Children." In C. P. Smith (Ed.), *Achievement-Related Motives in Children* (New York: Russell Sage Foundation, 1969).

white children and be exposed to their values. Certainly, Mexican-American and black children have greater contact with their white peers when they attend schools which are about 80 percent white than when they attend schools populated almost exclusively by minority children. Still, data from Riverside and elsewhere have suggested that the amount of interaction is often less than many proponents of desegregation expected it to be. Because of the large number of classrooms involved in the Riverside study, the researchers decided it was not feasible to observe the interethnic contact directly as it occurred. They also asked the children no direct questions about how much they interacted with those in different ethnic groups. They did, however, obtain sociometric choices which may be viewed as indirect measures of the level of interethnic interaction among Riverside's school-age children.

During each year of the Riverside school study all children in elementary school classrooms which included those in the study sample indicated which three of their classmates they would prefer as friends, as school work partners, and as fellow members of a ball team. Of greatest interest were the total number of times children in each ethnic group were chosen and the number of times they were chosen by white classmates. While these choices are clearly not direct evidence of actual interaction, the researchers cite several studies which showed that children's sociometric choices and their actual contact with others were related. The reader should keep in mind that only one of the four research works cited in this context is likely to have dealt with a situation involving children in different ethnic groups.[30] None of the other studies[31] mentions the race of the children participating in it, but other descriptive evidence suggests that they were primarily white and middle class (e.g., the study by Biehler was done at a kindergarten run by the University of Minnesota and involved children whose average IQ was 125.6).

In the first, second, and third years following desegregation, whites received more total choices as friends, as well as more choices from whites, than did Mexican-Americans and blacks. In subsequent years this difference only occurred for choices received from whites. All three groups now received about the same number of total choices, and the increase for minority children apparently reflected the fact that they now received more choices from others in minority groups. While desegregated schooling did result in some interethnic friendships, increased exposure to desegregation appeared not to lead to increased friendship between minority children and their white classmates.

Examination of children's choices for work partners revealed that

30. M. Shaw, *Changes in Sociometric Choices Following Forced Integration of an Elementary School* (ERIC Document No. ED 055 306, 1971).
31. R. F. Biehler, "Companion Choice Behavior in Kindergarten," *Child Development*, 25 (1954), 45-50; M. E. Bonney and J. Powell, "Differences in Social Behavior Between Sociometrically High and Sociometrically Low Children," *Journal of Educational Research*, 46 (1953), 481-495; E. Byrd, "A Study of Validity and Constancy of Choices in a Sociometric Test," *Sociometry*, 14 (1951), 175-181.

whites received the most choices, and also the most choices from other whites, in all years for which data were collected. Furthermore, the situation showed no tendency to improve over time. This is not especially surprising, however, in light of the fact that whites were, on the average, better students and hence likely to contribute more to the overall performance of the work team. Only with respect to play choices were minority students equal in sociometric status to their white peers. As a matter of fact, in the later years of the study, minority boys received more play choices than white boys. The researchers suggest an explanation similar to the one given for work-partner preferences. Children want to have the best possible players on their ball teams; the ethnicity of their teammates is less important than their athletic skill.

In sum, the absence of direct assessments of degree of interethnic contact following desegregation makes it difficult to determine how well Assumption 1b was supported by events in Riverside. We have no good data on the degree to which children from the different ethnic groups interacted with one another. Certainly they interacted more following school desegregation than before it. But the increasing ethnic encapsulation suggested by the sociometric friendship choices is particularly discouraging. When children of different ethnic groups attended school together, they still preferred to choose their friends from those of their own kind, and this is bound to have limited the frequency and intensity of interethnic interaction.

The third assumption underlying the lateral transmission of values model states that *the increased interethnic interaction resulting from desegregated schooling should cause minority children to take on the achievement-relevant values of their peers.* While laboratory evidence supports the notion that individuals whose ideas differ from those of others will tend to adopt the norms of the majority, this research rarely involves any deep-seated values.[32] Data from Riverside provide evidence on whether the achievement motivation of blacks and Mexican-Americans became more similar to that of whites when the groups began to attend school with one another. For the two goal-setting measures discussed above, scores of first, third, and fifth graders in spring 1966 were compared with scores of children enrolled in these three grades in spring 1967 using a four-way analysis of variance with time, grade, sex, and ethnicity as factors. For first-grade minority children, both goal-setting measures suggested higher achievement motivation following desegregation than before it. No pre- versus post-desegregation differences were found for older minority children or for whites.

Four additional measures related to achievement motivation were introduced during the spring 1967 testing sessions and were

32. See, e.g., the classic research on conformity in M. Sherif, *The Psychology of Social Norms* (New York: Harper and Row, 1966) and S. E. Asch, "Studies of Independence and Submission to Group Pressure: I. A. Minority of One against a Unanimous Majority," *Psychology Monographs*, 70 (1956), Whole No. 416.

administered again in 1969. Comparing 1967 scores with 1969 scores for minority children desegregated in fall 1966 and white children in their receiving schools provided an estimate of the effects of one versus three years of desegregated schooling. (Note that the selection of only those minority children desegregated in 1966 avoids the interpretative problems arising in other analyses due to the fact that the Riverside schools were actually desegregated over a three-year period.) The first new measure, fate control, was based on Rotter's Internal/External Locus of Control Scale[33] and designed to measure the extent to which children feel their fates are determined by themselves as opposed to outside forces beyond their control. Battle and Rotter[34] have shown this measure to be related to socioeconomic status and to race. Since poor and minority children actually are likely to encounter more external constraints, their greater externality may simply reflect a realistic perception of their environment. Still, students scoring higher in internality also tend to do better in school.[35] It seems reasonable that those who feel they have more control over what they can accomplish will feel more motivated to try to do well.

Two new measures were derived from Crandall's Intellectual Achievement Responsibility (IAR) Scale,[36] a 36-item scale on which children make attributions for negative and positve outcomes. When used with a group of children of above-average intelligence and achievement, this measure was shown to be related to questionnaire responses on the valuing of achievement and, for boys only, to achievement striving in a free play situation.[37] The Riverside team selected and modified six items from this scale, all involving negative outcomes. On three items children could attribute failures externally or to their own lack of ability and on the other three to external forces or their own lack of effort. While responses to these questions are certainly of interest, it is not clear how valid the complete IAR scale, and especially these shortened versions, are as measures of achievement motivation among minority children.

The same problem exists for the final measure introduced in 1967, delay of gratification. This measure involved presenting the child with two hypothetical choice situations in which he or she could spend money for something now or for something better later. The willingness to wait for delayed rewards may well be related to effort spent on homework, devoted to classroom learning and so forth, but the authors admitted that they could find no prior evidence to support this. The use of examples involving money seems especially likely to make the measure differentially valid for white and minority children

33. J. B. Rotter, "Generalized Expectancies for Internal versus External Control of Reinforcement," *Psychological Monographs*, 80 (1966), 1-28.
34. E. S. Battle and J. B. Rotter. "Children's Feelings of Personal Control as Related to Social Class and Ethnic Group," *Journal of Personality*, 31 (1963), 482-490.
35. Coleman et al., *Equality of Educational Opportunity;* P. McGhee and V. C. Crandall, "Beliefs in Internal-External Control of Reinforcements and Academic Performance," *Child Development*, 39 (1968), 91-102.
36. V. J. Crandall, W. Katkovsky, and A. Preston, "Motivation and Ability Determinants of Young Children's Intellectual Achievement Behaviors," *Child Development*, 33 (1962), 643-661.
37. *Ibid.*

since the latter come from homes where, on the average, less money is available to them.

These reservations aside, we turn now to a discussion of how one versus three years of desegregation affected children's scores on this set of measures. The relevant analysis was a four-way analysis of variance with time (1967 vs. 1969), grade, sex, and ethnicity as factors. The test scores of children in the third, fourth, and seventh grades in 1967 were compared with scores of children in these grades two years later. These three grades were reportedly chosen because "they allowed construction of independent matched samples."[38] In 1967 whites scored higher than minority children on all measures except the tendency to attribute failures to one's own effort. Different measures, however, showed different patterns when 1967 and 1969 scores were compared. For the two IAR measures and for fate control two additional years of desegregation had no effects on children's scores. All three ethnic groups showed less tendency to delay gratification in 1969 than they had two years earlier. (As the authors point out, this may reflect a general trend in our culture and reminds us that, due to the lack of a still-segregated control group, all changes over time reported in the Riverside study were subject to the effects of many historical events and social trends in addition to desegregated schooling.) Finally, scores on the two goal-setting measures first used in 1966 showed that black and Mexican-American girls improved with respect to goal-discrepancy and number of unusual shifts. Overall, though, there was clearly no evidence that minority children's achievement motivation became more similar to that of their white peers as they experienced more years of contact with them in the schoolroom.

High achievement motivation was thought to be a desirable attribute because, according to Assumption 1d, *having high achievement motivation will enable a person to reach higher levels of academic achievement*. Researchers in Riverside looked at the relationship between children's achievement test scores and their scores on the various achievement motivation measures, and their findings provided no support for this assumption. In examining the need for school achievement measure, the authors first divided the children into two categories depending upon whether their standardized total achievement test score was relatively high or low. They then performed analyses of variance with achievement level, sex, ethnicity, and grade as factors and need for school achievement as the dependent variable. Achievement test scores had no significant relationship to need for school achievement in 1966, 1967, or 1969, nor was there any relationship between changes in motivation and changes in academic achievement.

Similar analyses were carried out for the goal-setting measures

38. L. Biener and H. B. Gerard, "Effects of Desegregation on Achievement-Relevant Motivation." In Gerard and Miller, *School Desegregation*, p. 141.

from 1966 and the fate control, IAR, and delay of gratification measures obtained in 1967. (The investigators responsible for the chapter on these measures, however, chose to trichotomize, rather than dichotomize, with respect to total achievement test scores.) No relationship between motivation and achievement was found for the goal setting or IAR attribution to effort measures. Fate-control scores appeared to be related to achievement only for whites and Mexican-Americans. The IAR attribution to ability measure was related to achievement for girls, but not for boys. Finally, delay of gratification and achievement was related through a complex achievement by grade by sex interaction. Because these measures' relationships with achievement were examined for only one year, we have no information on how changes in one variable were related to changes in the other. We also have no information on the direction of the causal link for those relationships which were found. The information that is available, however, suggests that Assumption 1d is, at best, tenuous. If the various scales discussed in this section are considered to be valid measures of the achievement motivation of Riverside children, and if the standardized achievement test scores are good indices of their academic achievement, then the Riverside data provide no good evidence that a child's position on the first of these variables influences his position on the other.

Looking back, then, at the four assumptions underlying the hypothesis that desegregated schooling will lead to improved minority achievement as minority children adopt the achievement-relevant values of their white peers, what can we conclude? As assessed by researchers in Riverside, whites did initially value achievement more than did Mexican-Americans and blacks. This ethnic difference did not appear to decrease following desegregation of the Riverside school system. One explanaiton for the fact that lateral transmission of values did not occur is that minority children may not have interacted much with whites or perceived them as a reference group. The sociometric data, though not directly relevant to this point, are consistent with the notion that the degree of interethnic interaction was less than optimal in this regard. In any case, though, it is not clear from the Riverside data that, had minority children come to value achievement more highly, they would then have come to perform better on academic tasks. The inconsistent relationships obtained between the motivation and achievement measures and the predominance of findings of no relationship suggest that achievement motivation is, at best, only one of several factors determining whether a child will do well or poorly in school.

Before concluding this section, we should briefly mention one interesting finding in the Riverside study that does appear to be consistent with the lateral transmission of value hypothesis. The chapter on sociometric ratings reports the results of analyses examing the standardized verbal achievement test scores of minority

children in desegregated classrooms as a function of their pre-desegregation achievement and the number of times they were chosen as work partners by white peers. For low-achievement children, peer acceptance was not related to change in achievement between pre- and post-desegregation testings. For minority children initially doing relatively well, however, low levels of acceptance by white peers were associated with decrements in performance, while those receiving a greater number of work choices did not show this performance decline. The authors report that similar results were obtained for play and friendship choices. Unfortunately, we have no way of knowing if performing better made minority children more likely to be chosen by their white classmates, or if those better accepted by classmates consequently performed better, or both. We also do not know how, if at all, achievement motivation fits into the causal chain. The data are consistent, however, with a sequence of causation in which those minority children chosen more often by whites have more actual interaction with them, are more likely to adopt their achievement-relevant values, and, finally, by virtue of their enhanced motivation and their relatively high ability, are able to overcome the usual increase in the white-versus-minority achievement gap.

Model II: Improved Achievement through the Normalization of Instruction

Many proponents of school desegregation expected that teachers in desegregated classrooms would gear their teaching to the average level of their students, or teach up to the white students, and that minority children would improve their own academic progress in order to keep up. This "bootstrapping" could only occur if Assumption 2a were met and *the performance standards and curriculum content in desegregated classrooms were superior to those encountered in classrooms where most students were from minority groups.* Since Gerard and Miller's book contains little information about the curricula used in the various Riverside schools, we cannot tell if those used in predominantly white ones differed from those used in schools whose students were predominantly Mexican-American and black.

Indirect evidence that performance standards differed in desegregated and minority schools comes from information on the school grades received by Riverside children before and after the desegregation program was introduced. A comparison of the school grades received by children in the three ethnic groups with their achievement test scores indicated that, prior to desegregation, if a minority child and a white child scored the same on their achievement tests, the minority child was likely to receive higher school grades. Following desegregation, grades received by white children gradually improved relative to their achievement test scores. At the same time, the grades received by black and Mexican-American children gradually

worsened. By the third year following desegregation the relationship between test scores and school grades was essentially the same for all three groups. In other words, the same grading standards were apparently being applied to whites, Mexican Americans, and blacks. Since minority children were, on the average achieving at a lower level than their white peers, this meant that, in desegregated classrooms, they received lower grades than whites, and also lower grades than they had received prior to desegregation. As the authors point out, this "might be expected to produce effects opposite to those of normalization of instruction if we assume that grades act as rewards or punishments that enhance or depress motivation. Such motivational inducement would, in turn, tend to improve Anglo and depress minority achievement."[39] Thus, the fact that desegregated whites, Mexican-Americans, and blacks received comparable grades for comparable levels of achievement (as assessed by achievement test scores) was not necessarily a desirable thing from the point of view of those seeking improved minority performance. It is consistent, however, with the assumption that placing minority children in desegregated classrooms would expose them to higher performance standards.

The second assumption underlying the hypothesis that more demanding curricula and standards in desegregated classrooms would have beneficial effects on the performance of minority children is our Assumption 2b: *Exposure to higher performance standards set externally, e.g., by a teacher, will lead an individual to adopt higher performance standards for him- or herself.* The data from Riverside provide no direct evidence on how well minority children expected to do in school or how much they hoped they would learn. The researchers did ask children about their plans for finishing high school and attending college, but no information on changes in responses to these questions is reported in Gerard and Miller's book. The findings that desegregation appeared to have little effect on either children's self-esteem (see our discussion of Model III) or their motivation to achieve (see discussion of Model I) do suggest that minority children in desegregated classrooms did not adopt higher performance standards.

Other studies seem to support the assumption that those exposed to higher external standards will tend to expect more from themselves. For example, in a number of experimental studies by Locke,[40] different subjects were given different information on how much they should try to accomplish during the experimental session. Those told to try to accomplish more actually did, presumably because they felt less satisfied with lower levels of performance. Similarly, others[41] have

39. Singer, Gerard, and Redfearn, "Achievement," p. 70.
40. E. A. Locke, "The Relationship of Intentions to Level of Performance," *Journal of Applied Psychology*, 50 (1966), 60-66; E. A. Locke, "Relationship of Goal Level to Performance Level," *Psychological Reports*, 20 (1967), 1068.
41. T. N. Tombaugh and J. Tombaugh, "The Effects of Apparent Task Solubility and Reward upon the Duration of Problem Solving Behavior," *The Psychological Record*, 13 (1963), 83-87.

desegregation were related to changes in their achievement test performance, but we cannot tell if more positive self-views led to better performance or if children who performed better felt better about themselves.

Before concluding our discussion of Assumption 2c we should emphasize a boundary condition that limits the situations in which it could be expected to apply. As the Riverside researchers point out,[46] improved goals or motivations can improve a person's performance only if he or she has the ability to achieve a higher performance level. Mexican-American and black children entered desegregated schools with, on the whole, lower achievement test scores, and also lower scores on IQ tests, than those of their white classmates. To the extent that these test scores represent true deficiencies in the skills prerequisite for achievement at a level comparable to that of whites, minority children could not be expected to "bootstrap" themselves up to white children's achievement levels. While children may be able to overcome small gaps on their own, overcoming larger deficits would seem to be extremely difficult unless special remedial programs were provided.

Looking back at the hypothesis that normalization of instruction and higher performance standards would lead to improved performance by minority students in desegregated schools, what, if anything, can we conclude? The research conducted in Riverside by Gerard, Miller, and their colleagues supplied little evidence directly relevant to any of the three assumptions associated with this model. Information on grading patterns does support the notion that performance standards in desegregated schools were more demanding than those in schools with predominantly minority populations. Indirect evidence suggests that minority children did not adopt higher standards for themselves, while other data are consistent with the notion that those who expected to achieve more actually did. Since neither of these assumptions was well tested in Riverside, the most accurate conclusion seems to be that nothing definite about the internal standards of Riverside's minority students and their relationship to minority achievement can be concluded from the data discussed in Gerard and Miller's book.

Model III: Improved Achievement as a Consequence of the Absence of Discrimination

A popular belief among social scientists and the general liberal community in the 1950s and 1960s was that separating minority children from white children in the schools had detrimental effects on the former group's self-esteem. Being treated as different and, by implication, inferior by the community supposedly hurt the minority

46. Singer, Gerard, and Redfearn, "Achievement," p. 70.

found that subjects who were quoted higher norms for a performance task showed greater persistence at it.

Inspection of the psychological literature on the relationship between attitudes and performance also yields clues as to why minority students might fail to internalize high performance standards. Several studies have suggested that people with initially low opinions of themselves will feel uncomfortable with evidence that contradicts their low expectations. They will be especially uncomfortable with evidence that they can do well when it seems to increase demands that they do well in the future.[42] If minority children think they are unlikely to meet the high standards set by their teachers, they may simply decide that the standards do not apply to them. In a related vein, they may decide that the teachers do not really expect them to meet the standards in the first place. Subsequent sections of this paper will discuss the fact that many teachers in Riverside did, in fact, seem to expect less from minority students than from whites.

According to our Assumption 2c, *aiming for a higher level of performance will cause children to do better in school.* Thus if desegregation led Mexican-American and black children to adopt higher performance standards, these standards would, in turn, result in better actual performance. Again, a variety of other studies can be cited to support this notion. Locke reviewed a series of studies conducted by him and his colleagues in which harder goals, whether induced by the experimenter or chosen by the subject, led to better performance.[43] Feather and others have shown that the better subjects expect to do on certain tasks, the better the performances they actually achieve.[44]

Studies more closely related to the present situation have demonstrated positive relationships between the minimum course grades with which students say they will be satisfied and how well they end up doing in their courses.[45] Of course, a problem with these particular studies is that they are correlational in nature. Thus, they may only be showing that students are fairly accurate at predicting their course performance and proceed to set their goals in line with accurate expectations about how well they will do. Unfortunately, this is also a problem with the data from Riverside that come closest to providing support for Assumption 2c. As discussed below, changes in children's scores on one measure of self-esteem following

42. See, e.g., D. R. Mettee, "Rejection of Unexpected Success as a Function of the Negative Consequences of Accepting Success," *Journal of Personality and Social Psychology*, 17 (1971), 332-341; J. Maracek and D. R. Mettee, "Avoidance of Continued Success as a Function of Self-Esteem, Level of Esteem Certainty, and Responsibility for Success," *Journal of Personality and Social Psychology*, 22 (1972), 98-107; P. Brickman, J. A. W. Linsenmeier, and A. G. McCareins, "Performance Enhancement by Relevant Success and Irrelevant Failure," *Journal of Personality and Social Psychology*, 33 (1976), 149-160.
43. E. A. Locke, "Toward a Theory of Task Motivation," *Organizational Behavior and Human Performance*, 3 (1968), 157-189.
44. N. T. Feather, "Effects of Prior Success and Failure on Expectations of Success and Subsequent Performance," *Journal of Personality and Social Psychology*, 3 (1966), 287-298; N. T. Feather, "Change in Confidence Following Success or Failure as a Predictor of Subsequent Performance," *Journal of Personality and Social Psychology*, 9 (1968), 38-46.
45. E. S. Battle, "Motivational Determinants of Academic Competence," *Journal of Personality and Social Psychology*, 4 (1966), 634-642; E. A. Locke and J. F. Bryan, "Grade Goals as Determinants of Academic Performance," *Journal of General Psychology*, 79 (1968), 217-228.

child's view of his or her self-worth. Accompanying this belief in the negative effects of segregation were the beliefs which we have labelled as Assumption 3a and 3b: *Desegregated schooling will make minority children aware of favorable attitudes on the part of community members* and *their perceptions of other's favorable views of them will improve their views of themselves.*

It is not at all clear that desegregation of the Riverside school system caused minority children to feel that the community authorities now viewed them as the equals of their white peers. They and their families may still have been experiencing discrimination in other areas of their lives. Increased contact with whites is likely to have increased the salience of differences in socio-economic status and the awareness of economic discrimination. Furthermore, one-way busing caused much greater inconvenience and readjustment for minority children than for whites. As discussed earlier, white children continued to attend their neighborhood schools under Riverside's desegregation program, while most minority children rode buses to and from schools in neighborhoods other than those in which they lived. Indeed, while this one-way busing was part of the original petition for desegregation prepared by black parents in 1965, anecdotal evidence suggests that black parents now oppose it and feel that the burdens of busing should be shared more equally among minority and white children.[47]

Additional information implying that desegregated schooling did not eliminate minority children's perceptions of unfavorable attitudes towards them comes from the chapter on effects of teacher bias. Teachers involved in the Riverside study rated sample children on a 55-item semantic differential scale. Factor analysis of these ratings yielded two factors. One had to do with how well behaved a child was (the "discipline" factor) and accounted for 32 percent of the common variance. The other had to do with the child's academic talent and motivation (the "brightness" factor) and accounted for 17 percent of the variance. The researchers formed a measure of a teacher's evaluation of a child's brightness by summing the ratings given to the child on each of the 13 items loading on the brightness factor. They then standardized these ratings with respect to grade and sex. For each teacher with at least one white and one minority student included in the study in 1966-1967, the researchers calculated the ratio of the average brightness rating given to whites to the average brightness rating given to minority students, yielding what they called a "brightness index" for each teacher.

This brightness index is a less than perfect indicator of teacher bias. One problem for which the researchers attempted to correct was that white and minority students actually did differ in school performance, so that perception of a difference is not necessarily a

47. *Integrated Education*, 14 (1976), p. 32.

biased judgment. (The details of this correction for actual differences are discussed below.) The brightness index also, however, treats bias against Mexican-Americans and bias against blacks as a single variable. It involves use of only a small proportion of the items on which teachers rated students. Furthermore, 62 of the 145 teachers for whom an index was calculated had only one white student and/or one minority student included in the study sample, so their brightness indices may be greatly influenced by the idiosyncratic characteristics of particular children. Still, it is striking that 78 percent of the teachers had an index greater than 1.0, implying that they viewed white students as more intelligent and motivated than students from minority groups. And the researchers report that for those teachers who did not judge whites to be brighter, the differences in the opposite direction were small. Thus, it is probably not the case that desegregated minority students were generally exposed to favorable attitudes of authority figures. The most important authorities in the classroom situation, the classroom teachers, apparently viewed minority children as inferior to whites on those traits most closely linked to classroom performance. In addition, school administrators seem to have felt that many Riverside teachers were having problems relating to their minority group students.[48]

Mead, Goffman, and others have described one's self-view as emerging from impressions of how one is viewed by others,[49] and several studies have documented the relationship between perceptions of how others view one and how one views oneself. Thus, proponents of desegregation who expected that ending segregated schooling would show minority children that others had positive attitudes toward them also predicted that *minority children's self-esteem would improve as a consequence of this exposure to more favorable attitudes.* We have labelled this prediction as Assumption 3b. As discussed above, desegregated schooling was found not to remove minority children from exposure to prejudiced attitudes. Thus, it may be viewed as consistent with Assumption 3b, though certainly not as strong support, that Gerard and Miller report no evidence of improved minority self-esteem following desegregation. (That changes in minority children's self-esteem were reportedly unrelated to their teacher's degree of racial bias, however, seems inconsistent with this hypothesis.)

Three different scales which may be viewed as measures of self-esteem were administered to children in the Riverside school study. Two of these were developed by Bower and Lambert[50] to assess the emotional health of school-age children, but were used by

48. See letter from Mabel Purl, research director of the Riverside Unified School District, expressing the opinion of Superintendent E. Raymond Berry and quoted in M. Weinberg, *Minority Students: A Research Appraisal* (Washington, D.C.: U.S. Government Printing Office, 1977), pp. 233-234.
49. G. H. Mead, *Mind, Self, and Society* (Chicago: University of Chicago Press, 1934); E. Goffman, *Encounters* (Indianapolis, Indiana: Bobbs-Merrill, 1961).
50. E. M. Bower and N. M. Lambert, *A Picture Game* (Princeton, N.J.: Education Testing Service, 1962); E. M. Bower and N. M. Lambert, *Thinking About Yourself* (Princeton, N.J.: Educational Testing Service, 1962).

the Riverside investigators as "rough indices of a child's attitude toward himself – his self-confidence perhaps, or his self-esteem."[51] It is not clear how valid these scales are as measures of self-esteem for children in general or for minority children in particular. Certainly other studies have used self-esteem measures with greater face validity. In any case, the first Lambert-Bower scale was administered to children in grades kindergarten through three at the second of their two yearly interviews. They were asked to sort 54 pictures of other children engaged in various everyday activities into happy and sad categories. The greater the number of pictures in the happy category, the more favorable the child's view of himself was judged to be. Mexican-Americans and blacks scored significantly below whites on this scale both in 1966, prior to the institution of the desegregation program, and in 1967, after the desegregation program had begun. The differences were in the same direction the last time the test was administered – in 1969 – but failed to reach statistical significance. This was probably due to the small sample size that resulted from attrition and the fact that only the children initially in kindergarten, and now in grade three, completed the test in that year.

A second Lambert-Bower scale was completed by children in grades four through six at their 1966 and 1967 interview sessions. This measure involved having students read descriptions of imaginary children and rate how well each description fitted them and how well they wished it fitted. The discrepancy between these two sets of ratings (in the form of a correlation coefficient) was treated as an index of self-esteem. In both 1966 and 1967, analyses of variance with sex and ethnicity as factors suggested that black males had especially high, and black females especially low, self-esteem as assessed by this measure. The investigators report no statistics on the relationships between pre- and post-desegregation scores for either Lambert-Bower measure, but the consistency of the patterns over time suggests that there were no changes peculiar to minority children as a consequence of school desegregation.

A third measure which may be viewed as an index of self-esteem is discussed in a different chapter of Gerard and Miller's book. In 1966, 1967, and 1969 children in all grades completed a self-attitudes scale designed especially for this study. This scale included 15 items to which the child responded either "yes" or "no." A representative item asked "do you ever wish that you were someone else?" In all three years whites expressed more favorable self-attitudes on this scale than did blacks and Mexican-Americans, and Mexican-American children expressed the most negative attitudes of the three groups. A repeated-measures analysis of variance looking at how children's scores changed over time revealed that scores decreased in 1967, but returned to their predesegregation level by 1969. This trend appeared

51. J. D. Goodchilds, J. A. Green, and T. K. Bikson, "The School Experience and Adjustment." In Gerard and Miller, *School Desegregation*, p. 154.

to occur for all groups and was not peculiar to minority children. Here again, then, there is no evidence that desegregation improved minority self-esteem. If anything, it had a temporarily negative effect and had no effect in the long run. Of course, the "long-run" here is only three years after the start of the desegregation program. It is still possible that beneficial effects on the self-esteem of minority children would result from long-term exposure to desegregated classrooms and/or from attending schools where desegregation was an established way of life rather than a new and still evolving phenomenon.

The third assumption linking desegregated schooling to improved minority achievement under Model III is Assumption 3c: an *improvement in self-esteem will result in an improvement in academic achievement*. Indirect support for this assumption comes from the fact that minority children in Riverside showed improvement on neither of these variables. Additional weak support comes from reports of correlations between measures of self-esteem and measures of achievement. In 1966, among older blacks, higher scores on the Lambert-Bower self-esteem measure were associated with higher achievement test scores and better school grades. There was no consistent relationship, however, when all grades and ethnic groups were considered. For the self-attitude measure, 1966 scores had a low positive correlation with 1966 achievement when all groups were considered together. Furthermore, decreases in self-esteem following desegregation, as assessed by this measure, were associated with decreases in standardized achievement test scores, and increases in one variable were associated with increases in the other. Unfortunately, we have no way of knowing the direction of causality in these relationships. Children who view themselves more favorably may perform better, or those who perform better may come to view themselves more favorably, or both. Research cited in the context of Model II, however, supports the notion that the first relationship is a possibility. In several studies, more favorable views of one's ability to accomplish a task have resulted in superior performance on it.

In sum, then, the first assumption of Model III did not receive clear support in Riverside. Desegregation probably did not result in exposure to positive attitudes on the part of important others. Thus, there was no chance for Assumption 3b to take effect, i.e., for positive attitudes of signficant others to cause minority children to develop more positive views of themselves. The Riverside study did provide weak support for Assumption 3c, dealing with the relationship between self-esteem and academic performance. Had the first assumption been met, then, the entire model might have been supported. In a different circumstance, where desegregation successfully eliminated minority members' feelings that they were viewed as inferior, heightened self-esteem, and, as a consequence, improved academic performance might still result.

A Featured Finding: Effects of Teacher Bias

In the previous section we mentioned teachers' attitudes towards their students as a factor influencing their reactions to desegregation and discussed the development of a brightness index which compared a teacher's judgments of the intelligence and motivation of his or her white students in 1966-67 with those of the minority students in that year's class. To correct for the fact that the white and minority students were likely to present the teacher with different objective evidence regarding their ability, the investigators divided each teacher's brightness ratio by an analogous ratio of achievement. This achievement ratio compared white and minority children's performance on achievement tests administered during the previous year (and standardized across grade and sex). The authors do not specify precisely what achievement test scores were used, but a private communication with an individual involved in the research suggests that only tests related to verbal achievement were included.[52]

Researchers in Riverside looked at the relationship between this ratio of two ratios, which they called a bias index, and the achievement test scores obtained by each teacher's students during the 1966-67 school year. Their findings seem to have been considered extremely important by the researchers themselves and to have been focussed on by the popular press as well. For example, a recent article on busing reports Gerard's feeling that the reactions of teachers are crucial:

> At Riverside, he notes, in classes where the teacher's attitude was positive, the minority students at least did not lose ground academically. Where the teachers were bigoted, the minority kids actually declined to the point where they did even worse than they would have done if they had stayed in segregated schools.[53]

Similarly, when an article on the Riverside study of desegregation was published in *Psychology Today*, the short synopsis included on the contents page stated that:

> Ten years of large-scale busing brought no great benefits to black and Chicano children. And bigoted teachers did a lot of damage.[54]

These conclusions about "bigoted" teachers are based on two different analyses of the relationship between teacher bias and student achievement. First, the researchers calculated the correlation of the teacher bias index with the change in the achievement gap between white and minority students in the teacher's classroom. The correlation was strongly positive for verbal achievement and somewhat

52. Renee Jackson-White, in a phone conversation with Michael Hendricks, September 24, 1976.
53. W. Sage, "The Loaded School Bus," *Human Behavior*, 7 (March 1978), 18-23.
54. *Psychology Today*, 10 (June 1976), p. 3.

smaller for mathematical achievement. This correlational approach has a number of problems, e.g., it yields no information on how teachers affected particular groups of children. Because they realized the limitations of this approach, the researchers also conducted a second analysis. They classified children with respect to (1) their ethnic group (white, Mexican American, or black); (2) whether their initial verbal achievement, as assessed by performance on the previous year's achievement tests, was relatively high or low; and (3) whether their teacher was relatively high or low in racial bias. They then looked at the effects of these three variables on changes in verbal achievement using a three-way analysis of variance.

The analysis revealed main effects of bias (students with teachers low in bias showed greater improvement) and ethnicity (whites improved more than minority students). An interaction of bias and ethnicity suggested that having teachers high in anti-minority bias led minority students to experience a greater decline in performance, while it led whites to do a bit better. Finally, a three-way interaction of bias, ethnicity, and initial achievement revealed that this bias-ethnicity interaction occurred only among students with high initial achievement.

While this analysis may seem to yield more information than the correlational approach, and to confirm the notion that biased teachers have harmful effects, it, too, has a number of problems. Putting students of a single teacher in more than one cell of the design violates the rule that observations in different cells of an analysis of variance be independent. White students classified as high in initial achievement had higher initial scores than did minorities in this category, and more whites than minority students were classified as high in initial achievement, both absolutely and as a proportion of total students in that ethnic group. Only teacher ratings and student achievement from the 1966-67 school year were used, and test scores not related to verbal achievement were ignored. Finally, the index of teacher bias seems rather contrived. We have already identified certain problems with the brightness ratio forming the numerator for this index (see page 29). For example, the validity of a measure of teacher effects based on only a small number of students per class is open to question. It is also not clear that the prior year's verbal achievement test scores are valid indices of classroom performance, nor that dividing brightness ratios by achievement score ratios is the appropriate way to correct for true differences in performance.

Despite these problems with their analyses, the authors' conclusions concerning teacher bias are certainly of interest. Furthermore, they are consistent with a growing body of literature documenting the influence of teacher expectations on various classroom outcomes.[55] The fact that the researchers found relationships between

55. See J. Brophy and T. L. Good, *Teacher-Student Relationships: Causes and Consequences* (New York: Holt, Rinehart, and Winston, 1974), Chapters 2, 3, and 4, for a recent review of this literature.

the teacher bias index and other variables which might mediate its effects on students also lends support to the hypothesis that these effects are real. For example, teachers' responses to questionnaires dealing with their teaching experiences and practices indicated a tendency for those classified as low in bias to view the use of a single educational standard as less beneficial for minority children. Thus, the low-bias teachers may be those who make special allowances for differences in ethnic background. In line with this, low-bias teachers assigned similar grades to high achieving whites, Mexican-Americans, and blacks despite the fact that achievement test scores implied the former group was actually performing better. High-bias teachers, applying more uniform standards, gave better grades to high achieving whites than to the top students in the other two ethnic groups. The minority students in these classrooms may then have decided it was not worth their while to try to do their best, since even their best was unlikely to be rewarded with outstanding grades.

Teachers low in bias were also more likely to report using small-group projects as a means of motivating reluctant children. This greater use of small groups might be expected to increase the extent of interethnic contact in the classroom. In line with this, white students with teachers lower in bias chose minority students more often as friends and as work partners (but not as ball team members) according to the sociometric measures described above in our discussion of Model I. Indeed, recent research suggests that the use of small multiracial groups in the classroom may be an excellent way to promote positive race relations among school children.[56] And, though the evidence on this is less clear, improved academic achievement by children who are members of minority groups may be an indirect result of more favorable attitudes and greater interethnic interaction.

Conclusions

The above discussion suggests that both teachers and peers play important roles in determining whether a minority child's experience with desegregated schooling will be beneficial. Contrary to the three models proposed in the first chapter of Gerard and Miller's **School Desegregation**, however, their influence may not depend upon basic changes in the child's personality. Indeed, comments in the conclusion of Gerard and Miller's book indicate that the Riverside researchers have abandoned the notion that personality traits and changes are important:

> There were few substantial changes reflected in the personality measures, particularly those anticipated to be most strongly related to achievement . . . Even more fundamental to the

56. See, e.g., E. Aronson, N. Blaney, J. Sikes, G. Stephan, and M. Snapp, "The Jigsaw Route to Learning and Liking," *Psychology Today*, 8 (Feb. 1975), 43-50; R. E. Slavin, "Effects of Biracial Learning Teams on Cross-Racial Friendship and Interaction" (Baltimore: Center for Social Organization of Schools, The Johns Hopkins University, Report No. 240, 1977).

> question at hand, however, was the basic relation of these personality traits to academic achievement. Here the personality model failed completely.[57]
>
> Given our arguments above, the beneficial effects of desegregation are more likely to stem from the situational and social characteristics of the educational setting than from personality changes that might ensue from integration.[58]

We question the conclusion that the original models can be completely rejected based on evidence gathered in Riverside. Certain aspects of the models were not really well tested. Sometimes the most relevant data were not collected, and sometimes dependent measures were not clearly valid indices of the constructs they were intended to measure. Furthermore, all the data came from one rather special setting. That certain assumptions did not appear to be generally met in Riverside in the 1960's does not necessarily mean that they would not be met in other places at other times.

Perhaps, then, what is needed is a synthesis of the personality and situational-interpersonal approaches and the construction of more complex models tracing the effects of desegregated schooling on children. Just as the attitudes of peers and teachers toward minority students in desegregated classrooms will not necessarily be positive, the achievement-oriented attitudes of minority children and their attitudes towards themselves will not automatically change when they are placed in multiethnic settings. Furthermore, probably not all children with supportive teachers will thrive, and not all children who are motivated to do well will, in fact, do so. The major error in judgment of the research team studying school desegregation in Riverside may not have been their focus on personality, as opposed to interpersonal, factors. Rather, it may have been their orientation towards following and documenting desegregation's beneficial effects, effects which liberal thinkers felt were bound to ensue from social contact alone.

Desegregation is too often presented as largely an administrative change. The most important message of the chapter on teacher bias and perhaps the book as a whole may be that desegregation is not a simple, well-defined, and uniform treatment. Desegregated schooling will have different effects on different children, and a more realistic approach would be to focus on the patterns of social, educational, and personality factors most likely to produce beneficial effects.

The conclusion that "the personality model failed completely" is thus not entirely warranted. Yet, this still seems to be the message which the research in Riverside has conveyed to many people. A recent scholarly review examining the psychological bases for

57. N. Miller, "Summary and Conclusions." In Gerard and Miller, *School Desegregation*, pp. 284-285.
58. *Ibid.*, p. 293.

desegregation[59] included Gerard and Miller's results and reached a similar pessimistic conclusion. More importantly, policy makers and other social commentators not trained in the analysis and interpretation of data have been led to believe that busing itself failed in Riverside. Newspaper editorials and nationally syndicated television programs have cited Gerard and Miller's work as support for a return to segregated schooling.[60] Gerard and Miller themselves take a view which is much less extreme:

> Simply implementing a busing or desegregation program will not by itself achieve "integration" in the full sense of the word. Beyond desegregation, additional procedures must be developed to foster integration of the minority child into the classroom social structure and academic program.[61]

If there is one lesson to be learned from Gerard and Miller's study, it is that one-way busing alone will not heal all the psychological wounds caused by segregation. In sum, the lesson is not that school desegregation will inevitably fail, but that we have not yet specified the ameliorative programs necessary to make it work.

59. W. G. Stephan, "School Desegregation: An Evaluation of Predictions Made in *Brown v. Board of Education*," *Psychological Bulletin*, 85 (1978), 217-238.
60. E.g., National Broadcasting Company, *Tony Brown's Journal* (syndicated program); J. D. Lofton, Jr., "Forced Busing a Flop," editorial in the *Manchester Union Leader*, Manchester, N.H., June 23, 1976.
61. Miller, "Summary and Conclusions," p. 303.

Works Cited

Anderson, L. V., *The Effect of Desegregation on the Achievement and Personality Patterns of Negro Children* (doctoral dissertation, George Peabody College for Teachers, 1966) (University Microfilms No. 66-11, 237).

Aronson, E.; N. Blaney; J. Sikes; G. Stephan; and M. Snapp. "The Jigsaw Route to Learning and Liking," *Psychology Today*, 8 (February 1975), 43-50.

Asch, S. E., "Studies of Independence and Submission to Group Pressure: I. A Minority of One against a Unanimous Majority," *Psychological Monographs*, 70 (1956), Whole No. 416.

Battle, E. S., "Motivational Determinants of Academic Competence," *Journal of Personality and Social Psychology*, 4 (1966), 634-642.

Battle, E. S. and J. B. Rotter. "Children's Feelings of Personal Control as Related to Social Class and Ethnic Group." *Journal of Personality*, 31 (1963), 482-490.

Biehler, R. F., "Companion Choice Behavior in Kindergarten," *Child Development*, 25 (1954), 45-50.

Biener, L. and H. B. Gerard "Effects of Desegregation on Achievement-Relevant Motivation." In H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).

Bonney, M. E. and J. Powell. "Difference in Social Behavior Between Sociometrically High and Sociometrically Low Children," *Journal of Educational Research*, 46 (1953), 481-495.

Bower, E. M. and N. M. Lambert. *A Picture Game* (Princeton, N.J.: Educational Testing Service, 1962).

Bower, E. M. and N. M. Lambert. *Thinking About Yourself* (Princeton, N.J.: Educational Testing Service, 1962).

Brickman, P.; J. A. W. Linsenmeier; and A. G. McCariens. "Performance Enhancement by Relevant Success and Irrelevant Failure," *Journal of Personality and Social Psychology*, 33 (1976), 149-160.

Brophy, J. and T. L. Good. *Teacher-Student Relationships: Causes and Consequences* (New York: Holt, Rinehart, and Winston, 1974).

Brown v. Board of Education, 347 U.S. 483 (1954).

Byrd, E., "A Study of Validity and Constancy of Choices in a Sociometric Test," *Sociometry*, 14 (1951), 175-181.

Cambell, D. T. and J. C. Stanley. *Experimental and Quasi-Experimental Designs for Research* (Chicago: Rand McNally, 1963).

Coleman, J. S.; E. Q. Campbell; C. J. Hobson; J. McPartland; A. M. Mood; F. D. Weinfield; and R. L. York. *Equality of Educational Opportunity* (Washington, D.C.: U.S. Government Printing Office, 1966).

Crandall, V. J.; W. Katkovsky; and A. Preston. "Motivational and Ability Determinants of Young Children's Intellectual Achievement Behaviors," *Child Development*, 33 (1962), 643-661.

Feather, N. T., "Effects of Prior Success and Failure on Expectations of Success and Subsequent Performance," *Journal of Personality and Social Psychology*, 3 (1966), 287-298.

Feather, N. T., "Change in Confidence Following Success or Failure as a Predictor of Subsequent Performance," *Journal of Personality and Social Psychology*, 9 (1968), 38-46.

Finger, J. A., "Why Busing Plans Work," *School Review*, 84 (1976), 364-372.

Gerard, H. B., "The Study." In H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).

Gerard, H. B. and N. Miller (Eds.). *School Desegregation* (New York: Plenum Press, 1975).

Gerard, H. B. and N. Miller. "Introduction." In H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).

Goffman, E., *Encounters* (Indianapolis, Ind.: Bobbs-Merrill, 1961).

Goodchilds, J. D.; J. A. Green; and T. K. Bikson. "The School Experience and Adjustment." In H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).

Hendrick, I. G., "The Historic Setting." In H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).

Integrated Education, 14 (1976).

Locke, E. A., "The Relationship of Intentions to Level of Performance," *Journal of Applied Psychology*, 50 (1966), 60-66.

Locke, E. A., "Relationship of Goal Level to Performance Level," *Psychological Reports*, 20 (1967), 1068.

Locke, E. A., "Toward a Theory of Task Motivation," *Organizational Behavior and Human Performance*, 3 (1968), 157-189.

Locke, E. A. and J. F. Bryan. "Grade Goals as Determinants of Academic Performance," *Journal of General Psychology*, 79 (1968), 217-228.

Lofton, J. D., Jr., "Forced Busing a Flop," *Manchester Union Leader*, Manchester, N.H., June 23, 1976.

Mahan, T. W., "Project Concern — 1966-1968: A Report on the Effectiveness of Suburban School Placement for Inner-City Youth" (Hartford, Conn.: Board of Education, 1968).

Maracek, J. and D. R. Mettee. "Avoidance of Continued Success as a Function of Self-Esteem, Level of Esteem Certainty, and Responsibility for Success," *Journal of Personality and Social Psychology*, 22 (1972), 98-107.

Maynor, W., *Academic Performance and School Integration: A Multiethnic Analysis* (doctoral dissertation, Duke University, 1970) (University Microfilms No. 71-10, 401).

McGhee, P. and V. C. Crandall. "Beliefs in Internal-External Control of Reinforcements and Academic Performance," *Child Development*, 39 (1968), 91-102.

Mead, G. H., *Mind, Self, and Society* (Chicago: University of Chicago Press, 1934).

Mettee D. R., "Rejection of Unexpected Success as a Function of the Negative Consequences of Accepting Success," *Journal of Personality and Social Psychology*, 17 (1971), 332-341.

Miller, N., "Summary and Conclusions." In H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).

Miller, N. and H. B. Gerard. "How Busing Failed in Riverside," *Psychology Today*, 10 (June 1976), 66-70 and 100.

Moskovitz, J. M. and P. M. Wortman. "A Secondary Analysis of the Riverside School Desegregation Study" (Draft paper. Evanston Ill.: Northwestern University Psychology Department, 1977).

National Broadcasting Company. *Tony Brown's Journal* (syndicated program).

Orfield, G., "How to Make Desegregation Work: The Adaptation of Schools to their Newly-Integrated Student Bodies," *Law and Contemporary Problems*, 39 (1975), 336-338.

Pettigrew, T., "Social Psychology and Desegregation Research," *American Psychologist*, 16 (1961), 105-112.

Prichard, P. N., "Effects of Desegregation on Student Success in the Chapel Hill Schools," *Integrated Education*, 1 (1969), 33-38.

Psychology Today, 10 (June 1976).

Purl, M. C. and J. A. Dawson. "The Achievement of Students in Primary Grades after Seven Years of Desegregation" (Riverside, Cal.: Riverside Unified School District, 1973).

Redfearn, D. and H. B. Gerard. "The Overall Research Design and Some Methodological Considerations." In H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).

Rotter, J. B., "Generalized Expectancies for Internal versus External Control of Reinforcement," *Psychological Monographs*, 80 (1966), 1-28.

Sage, W., "The Loaded School Bus," *Human Behavior*, 7 (March 1978), 18-23.

Sattler, J. M., "Racial Experimenter Effects." In K. S. Miller and R. M. Dreger (Eds.), *Comparative Studies of Blacks and Whites in the United States* (New York: Seminar Press, 1973).

Shaw, M. *Changes in Sociometric Choices Following Forced Integration of an Elementary School* (ERIC Document No. ED 055 306, 1971).

Sherif, M., *The Psychology of Social Norms* (New York: Harper and Row, 1966).

Singer, H.; H. B. Gerard; and D. Redfearn. "Achievement." In H. B. Gerard and N. Miller (Eds.), *School Desegregation* (New York: Plenum Press, 1975).

Slavin, R. E., "Effects of Biracial Learning Teams on Cross-Racial Friendship and Interaction" (Baltimore: Center for Social Organization of Schools, The Johns Hopkins University, Report No. 240, 1977).

Smith, C. P., "The Origin and Expression of Achievement-Related Motives in Children." In C. P. Smith (Ed.), *Achievement-Related Motives in Children* (New York: Russell Sage Foundation, 1969).

Stephan, W. G., "School Desegregation: An Evaluation of Predictions Made in *Brown v. Board of Education*," *Psychological Bulletin*, 85 (1978), 217-238.

St. John, N. H., *School Desegregation: Outcomes for Children* (New York: Wiley, 1975).

Tombaugh, T. N. and J. Tombaugh. "The Effects of Apparent Task Solubility and Reward upon the Duration of Problem Solving Behavior," *The Psychological Record*, 13 (1963), 83-87.

Useem, E., Review of *School Desegregation* by H. B. Gerard and N. Miller, *Harvard Educational Review*, 47 (1977), 71-74.

Weinberg, M., *Minority Students: A Research Appraisal* (Washington, D. C.: U.S. Government Printing Office, 1977).